REMARKS

This Amendment is filed in response to the Office Action dated April 7, 2006. This application should be allowed and the case passed to issue. No new matter is raised by this amendment. The amendment to claims 1 and 8 are supported by claim 4, as originally filed. Claims 1 and 8 are further amended to address the informalities noted by the Examiner. Claims 5, 6, and 7 are amended to maintain proper dependency.

Claims 1-11 are pending in this application. Claims 1-8 have been rejected. Claims 1, 5, 6, 7, and 8 are amended. Claim 4 has been canceled. New claims 9-11 are added in this response.

Objection to the Specification

The Examiner asserted that the title of the invention was not descriptive.

In response to this objection, the title has been amended to make it more descriptive.

Objections to the Claims

Claim 8 was objected to because "A" in line 2 should be --a--.

In response to this objection, claim 8 has been amended to correct this informality.

Claim Rejections Under 35 U.S.C. § 112

Claims 1-8 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because of a lack of antecedent basis for "the bipolar electrodes" and "the insulation films." This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

Claims 1 and 8 have been amended to address the noted informalities. The singular forms of the limitations "bipolar electrode", "polymer electrolyte layer" and "insulation layer" have been replaced with plural forms. Applicants submit that the claims fully comport with the requirements of 35 U.S.C. § 112.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-8 were rejected under 35 U.S.C. §102(b) as being anticipated by Rippel (U.S. Pat. No. 5,441,824).

Claims 1-8 were rejected under 35 U.S.C. §102(e) as being anticipated by Fredriksson et al. (U.S. Pat. Pub. No. 2003/0054244).

These rejections are traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the invention, as claimed, and the cited prior art. For the Examiner's convenience the reference numbers from embodiments of the present invention are included below.

An aspect of this invention, per claim 1, is a bipolar battery comprising a plurality of bipolar electrodes (8), each having a positive electrode layer (2) on one side of a collecting foil (1) and a negative electrode layer (3) on the other side of the collecting foil (1). A plurality of polymer electrolyte layers (4) are each disposed between the bipolar electrodes (8). A plurality of insulation layers (5, 6) are each provided on a periphery of at least one side of the collecting foil (1), and each of the insulation layers is a flexible insulation film.

Another aspect of this invention, per claim 8, is a vehicle comprising a power source having a bipolar battery (20). The bipolar battery (20) comprises a plurality of bipolar electrodes (8), each having a positive electrode layer (2) on one side of a collecting foil (1) and a negative electrode layer (3) on the other side of the collecting foil (1). A plurality of polymer electrolyte layers (4) are each disposed between the bipolar electrodes (8). A plurality of insulation layers (5, 6) are each provided on a periphery of at least one side of the collecting foil (1), and each of the insulation layers is a flexible insulation film.

According to an embodiment of the present invention, as shown in FIG. 2C, the insulation film (6) as an insulating layer is disposed on the entire periphery of the collecting foil (1). Additionally, the insulation film (6) is structured to protrude outward beyond the collecting foil (1) with a protruding length longer than the thickness of one single cell. Moreover, the insulation film (6) is flexible and adhesive. Disposition of this insulation film (6) facilitates isolation of the electrodes within a single cell and isolation of the electrolytes between the cells, which can thereby prevent a short circuit at the electrode edge. Further, in an embodiment of the invention, as shown in FIG. 2B, the neighboring insulation films (6) are adhered to each other, thereby enabling the side of the cells to be protected even more completely (see FIGS 2A-2B, and page 10, line 14-page 11, line 11).

Rippel discloses a quasi-bipolar battery with a biplate sealing frame (141) provided on its periphery. Fredriksson et al. disclose a bipolar battery with an electrolyte barrier (14, 22) and an elastomer (15, 22) provided on its periphery. However, Rippel and Fredriksson et al. fail teach or suggest each of the insulation layers provided on a periphery of at least one side of the collecting foil and being a flexible insulation film, as required by claims 1 and 8. Neither Rippel nor Fredriksson et al. suggest that the Examiner-asserted insulation layer provided on a periphery of at least one side of the collecting foil is **a flexible film**.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. *Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321

(Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Rippel and Fredriksson et al. do not disclose the insulation layer provided on a periphery of at least one side of the collecting foil is a flexible film, as required by claims 1 and 8, they do not anticipate claims 1 and 8.

Applicants further submits that Rippel and Fredriksson et al., whether taken alone, or in combination do not suggest the claimed bipolar battery and vehicle.

The dependent claims 2, 3, 5-7, including new claims 9-11, are allowable for at least the same reasons as claims 1 and 8, and further distinguish the claimed bipolar battery and vehicle.

In view of the above amendments and remarks, Applicant submits that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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